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#### INTERNATIONAL ECONOMIC CHANGE AND THE INDUSTRIAL DEVELOPMENT OF DEVELOPING COUNTRIES

Prepared by the Secretariat

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#### EXECUTIVE SUMMARY

The present document briefly reviews current changes in the international economic environment, presents short- and long-term economic growth prospects for various regions of the world and examines the impact and role of human capital, technology and institutions on the growth prospects of those regions.

From zero growth in 1991, the world economy grew at just over 1 per cent in 1992, with a similar figure projected for 1993. Manufacturing registered negative growth in 1991 and 1992, with prospects of a slight upturn of 1.3 per cent in 1993. Growth momentum is expected to return by 1994, growth in output projected to increase by 3.1 per cent and global manufacturing by 3.5 per cent. The major factors driving overall change in the global economy are technological change and liberal, market-based economic policies. Technological change has never been greater; advances in computers and electronics in particular are rapidly lowering the costs of communication-information control. Industrialization is a process that is only 200 years old; the prime mover has always been technological innovation. While economic theory long ago incorporated technology as one of the key sources of economic growth, corporate management and Governments have only recently come to recognize that knowledge embodied in technology is a factor of production on a par with capital and labour. Technology and market-based policies have thus forced industrial enterprises in both developed and developing countries to become more efficient by restructuring in terms of production platforms, technology, management, employment, finance and linkages among themselves.

The recovery of growth in the United States has remained sluggish, being little more than 2.1 per cent in 1993. Much of Western Europe faces recession and Eastern Europe is confronted with difficult problems of political and economic transition. Even Japan, which had seemed invulnerable to economic recession, is undergoing a rapid economic deceleration despite its Government's pump-priming efforts. The uncertainty surrounding the growth patterns of the major industrialized countries has a direct bearing on the growth prospects of developing countries. However, UNIDO is convinced that the growth rate for developing countries as a group (excluding China) should improve by half a percentage point in 1993 to 4.0 per cent and by about the same amount in 1994.

to bring the rate up to 4.4 per cent. Manufacturing value added (MVA) growth rates should be even better, reaching 4.9 per cent and 6.0 per cent in 1993 and 1994, respectively. Moreover, UNIDO's five-year projection places the growth rate for developing countries (excluding China) at an average of 4.4 per cent per year, with China expected to grow at an average 8.0 per cent per year for the next five years.

Economic transition is not unique to the countries of Eastern Europe and the former Soviet Union. Many countries of the developing world face the problem of economic transition as they move from inward-looking to outward-looking strategies. Having taken the first macroeconomic steps in liberalizing trade and implementing monetary stability, those countries now require institutional and micro-economic reform to foster the creation and growth of the enabling environment so essential to industrial development. The issues of debt, capital flows, macroeconomic policy and trade liberalization that dominated the attention of policy makers in the 1980s all still remain crucially important in some countries such as those in sub-Saharan Africa. However, questions of technology, industrialization and productivity now clamour for attention with the increasing recognition that the accumulation of technological capabilities within productive enterprises remains central in attempts to expand output, improve export performance and raise standards of living. Linkages between research and technology, technological education and industrial production have to be strong and well articulated; they depend on well functioning institutional and organizational arrangements. Lack of investment in physical and human capital or investment misallocation in both areas are the most significant barriers to improved living standards.

After the political events in Eastern Europe and the economic reforms in many developing countries, the free market model has been seemingly restored to the central position in economics from which Lord Keynes had dislodged it only temporarily. The "magic of the market" is now presumed to cure all problems in both developed and developing countries, thereby dismissing the validity of the theory of economic development. The crucial difference between developing and developed countries, however, lies in the extent of the development of their markets. Policy prescriptions must distinguish between industrialized economies with highly developed goods and capital markets and developing economies with poorly developed or - especially at present - collapsed markets. The problem for Governments and the international community is to decide between the fine balance between too much and too little intervention, between too much and too little protection, and between too much and too little privatization.

### Introduction

1. The purpose of the present document is to briefly review current changes in the international economic environment and to indicate the impact those changes have on the industrial development of developing countries. In analysing those impacts, short-term growth rates for the economy and the industrial sector are presented for developing regions and subregions, as well as for the countries of Eastern Europe and the former Soviet Union. The longer-term prospects of these

areas are examined in outline, and an indication is given of some of the challenges that have to be met and some of the opportunities that have to be seized. Emphasis is placed on the need to enhance the development of human resources, and the institutions through which human capacities determine the success of countries' industrial development efforts.

2. It should be recalled that physical capital stock is only part of the explanation of the difference in output per worker in developed and developing countries. A larger stock of physical capital leads to improved productivity and higher output and income. However, it is human skills and human enterprise, as well as the institutions - organized and operated by men and women - which make the crucial difference in determining the speed and direction of industrial and economic development. Such development depends vitally on the creation of a labour force equipped both with the necessary technological skills for modern industrial production and with a motivation or philosophy that facilitates the acceptance and promotion of economic and technical change. There is an essential complementarity between capital equipment and technology and a skilled and motivated labour force.

3. Following a brief note on technology the document reviews current changes in the international economic environment. The paper then goes on to examine the impacts of those changes in Latin America and the Caribbean; sub-Saharan Africa; North Africa and Western Asia; the South Asian subcontinent; East and South-East Asia; China; Eastern Europe and the former Soviet Union. Certain commonalities in economic background as well as the availability of data has determined the use of these subregional and regional aggregates rather than the more conventional United Nations categories of regions. The longer-term industrial and economic prospects of each region or subregion is examined in outline, with some slight emphasis being given to technological and human resource capability. The industrial outlook of the three most developed regions - North America, Japan and Western Europe - is provided in the summary of the Global Report (GC.5/20, chap. II). The document ends with a brief conclusion on technological capability and industrial competitiveness.

### I. TECHNOLOGY AS A KEY COMPETITIVE ASSET

4. Industrialization is a process only 200 years old; the prime mover has always been the progress of technological innovation. In the last decade of the twentieth century technology is ever more a key asset for firms' competitiveness and countries' economic growth for a number of reasons which have come more sharply into focus.

5. First, production is increasingly knowledge-intensive, as a combined result of the emergence and expansion of information- and knowledge-based industries and the diffusion of new process technologies. On the one side, there is a structural shift in the major industrial countries to industries which are innovation- and skill-intensive, such as electronics, electrical, non-electrical and transport equipment as well as to service industries. On the other, new information-based technologies have not only affected high-tech sectors but also find significant applications that enhance productivity

and quality in many industries where technologies are mature and well diffused.

6. Secondly, the accumulation of innovation-based advantages is a prerequisite for international competitiveness. The firm's technological capabilities and the characteristics of the national system of innovation in which it operates have a major impact on relative and absolute trade advantages. The pattern of trade in relatively high technology-intensive industries is primarily affected by countries' advantages in product innovation. The ability to raise efficiency through new process technologies (including flexible automation) and organizational changes is, in turn, critical for international competitiveness in low and medium technology-intensive industries. Technology is, in short, an important explanatory factor in international trade.

7. Thirdly, while economic theory long ago incorporated technology as one of the key sources of economic growth, 1/ the perception that knowledge embodied in technology is a factor of production like capital and labour now has become widely recognized by corporate management and government. Thus, past investments and accumulated knowledge open the possibility of a virtuous cycle in which investment spurs knowledge and knowledge spurs investment. Lack of investment in physical and human capital, and investment misallocation in both areas are the most significant barriers for the developing countries catching up with the industrialized countries.

8. In sum, technology is a critical asset for production, competitiveness and long-term growth. Greater and explicit efforts are made by firms and Governments, particularly in the rich developed countries, to build up and preserve technological advantages. Those efforts reflect themselves in intangible investments and in science and technology, as well as in the attitudes of firms and Governments towards technology transfer and diffusion.

## II. THE GLOBAL ECONOMY IN THE SHORT TERM

9. From zero growth in 1991, the world grew at barely more than 1 per cent in 1992, and 1993 promises to be the same. World manufacturing suffered more, registering negative growth in 1991 and 1992 and the outlook for 1993 is hardly better at 1.3 per cent. The growth momentum is expected to return by 1994, with an output growth of 3.1 per cent projected and with manufacturing moving strongly to positive growth territory, at about 3.5 per cent per annum. Several general factors are driving overall change in the global industrial economy. First, is that technological change has, perhaps, never been greater than at present; advances in computers and electronics in particular are rapidly lowering costs of communication - information - control. Secondly, liberal, market-based economic policies have spread to all corners of the globe. Industrial

enterprises in both developed and developing countries are being forced to restructure in terms of production platforms, technology, management, employment, finance and linkages among themselves, merely to remain competitive.

10. Thirdly, output behaviour in the advanced countries has confounded conventional norms. By past standards the United States should have recovered in 1992 with a growth rate much above the 2.1 per cent increase recorded, and 1993 promises to be not much better. Short-term regional differences seem as great as the common factors. Present performance of both Western Europe and Eastern Europe - including the new countries that replaced the former Soviet Union - is disappointing. In the latter region, introduction of market-based economic structures has proved much more difficult than had originally been hoped for, and industrial decline continues in 1993 for all but a few Eastern European countries. In Western Europe, prospects have been sharply downgraded since about the third quarter of 1992. The expected positive impact of the introduction of the single market for the European Community (EC) in 1993 seems hardly noticed, and the Exchange Rate Mechanism has collapsed. Indeed, the first year of the European Community's single market, 1993, has seen the continent's worst recession for two decades. Germany is now in deep recession, with manufacturing output slated to fall by 6 per cent by the year's end, and France, Italy, Netherlands, Spain and Sweden are all in recession. Output gains expected in other Western European countries this year will be effectively cancelled in the regional aggregate by these recessions. Even Japan, which seemed invulnerable to economic recession, is undergoing a rapid economic deceleration despite its Government's pump-priming efforts.

### A. Growth prospects of developing countries

11. The uncertainty surrounding the growth patterns of the major industrialized countries has a direct bearing on the growth prospects of developing countries. UNIDO is convinced however that the growth rate for developing countries as a group (excluding China) should improve by half a percentage point in 1993 to 4.0 per cent and by about the same amount in 1994 to bring the growth rate up to 4.4 per cent. Manufacturing value added (MVA) growth rates should be even better, and should reach 4.9 per cent and 6.0 per cent in 1993 and 1994 respectively. Nevertheless, in 1994, the prolonged recession in rich countries would negatively affect most Caribbean countries and some Latin American countries, including Argentina, Suriname and Venezuela; Chad, Côte d'Ivoire, Ghana, Madagascar, Mozambique, Nigeria, Sierra Leone and Zambia in Africa; Saudi Arabia and other oil exporters in the Middle East; and Indonesia, Malaysia, Papua New Guinea and other commodity exporters in South-East Asia. At the same time, developing countries have learned to insulate their economies more effectively from adverse external economic forces, and to rely more on their internal resources and domestic or intraregional markets. 2/ What concerns

1/ E.F. Denison, The sources of economic growth in the United States and the alternatives before us, Committee for Economic Development, Washington, D.C., 1962 and R. Solow, "Technical change and the aggregate production function", Review of Economics and Statistics, August 1957.

2/ Industry and Development: Global Reports 1986 (UNIDO publication, Sales No: E.86.II.B.5), 1987 (UNIDO publication, Sales No: E.87.II.B.2), 1988/89 (UNIDO publication, Sales No: E.88.III.E.6).

developing countries most nowadays is the macro-economic environment under which the global economy functions. It is the qualitative changes in the global financial and trading regimes, i.e. changes in interest and exchange rates and protection, that affect developing countries the most. To a large extent, those changes are brought about by policies of major industrialized countries. One of the changes that could help the world economy in the 1990s is a potentially strong United States of America economic leadership with its principal focus on economic growth. To be sure, the immediate objective of United States policy makers is the domestic economy, and in particular job creation. While the effort to revitalize the United States economy is accompanied with new policy initiatives on international economic dealings and trade arrangements, it would also eliminate some basic global economic imbalances. Long-term United States interest rates have fallen by about 2 percentage points and short-term rates over which the Government exercises considerable control have been reduced by about 5 percentage points since mid-1990 to their lowest level in 30 years. Lower interest rates are expected to save United States business some \$30 billion, home-owners some \$22 billion and Government some \$30 billion a year. Moreover, the United States Government hopes to reduce its fiscal deficit, which had become a burden to the world as well as to the United States. If successful, the deficit reduction would tend to keep interest rates down, domestically and internationally, and encourage investment which is essential for growth.

12. The benefit of a lower interest rate to indebted developing countries is obvious. The aggregate external debt of developing countries, in various stages of debt restructuring, is estimated to still exceed \$1.2 trillion, of which the interest-rate-sensitive portion amounted to \$698 billion in June 1992. A one hundred bases points (i.e. 1 percentage point) reduction in interest rates saves these countries about \$7 billion a year in hard currencies. That these are significant sums to developing countries can be seen from the fact that the net transfer of financial resources to developing countries amounted to \$28 billion in 1991 and \$25 billion in 1992. Of the \$134 billion in aggregate financial inflows to developing countries that took place in 1992, more than half originated from the private sector, with this growth especially from the non-bank private sector reflecting a reassessment by these investors of the performance and prospects of developing countries. The multilateral financial institutions usually credit this change of perception to the painful reforms undertaken by developing countries, especially their financial and trade liberalization measures. Two examples are sufficient to illustrate this change of perception. During the 1980s, the idea of United States institutional investors voluntarily purchasing peso-denominated Mexican Treasury bills would have been highly unlikely. Since 1991, foreign investors reportedly have purchased \$9 billion in Mexican Treasury bills (which currently yield 17 per cent), and some \$20 billion in Mexican bank certificates of deposit (which yield 22 per cent). The main deterrent to such purchases, the currency risk associated with these investments, proved to be minimal, i.e. less than 5 per cent peso devaluation a year so far. This can be compared with the 20 to 30 per cent one-time devaluations involving some of the key European currencies during the same period. The other

example can be found in a comparison of the performance of so-called "emerging stock markets" of some developing countries with the major markets of London, New York and Tokyo. Foreign equity investment in these emerging markets increased from \$0.4 billion in 1989 to over \$6.0 billion in 1991, and to an estimated amount of \$5.2 billion in 1992. Total private portfolio investment flows, including international bond financing, to developing countries have jumped from \$7.6 billion in 1989 to \$20.3 billion in 1991, and are estimated to have reached over \$27 billion in 1992.

#### B. The industrial competitiveness of developing countries

13. The idea that poorer countries with low wage labour should catch up on richer ones through trade is as old as the theory of international trade itself. That convergence in income has somehow failed to take place between developed and developing countries - and has happened mainly among developed countries up to now - is usually taken as an indictment against the existing system of global trade.

14. An analysis of the wage levels in the manufacturing sector observed in 1990 in some 110 countries, converted into dollars at current exchange rates, shows that German manufacturing workers were paid the highest and the workers in the United Republic of Tanzania the lowest wages in terms of annual remuneration. There was an enormous difference in productivity between the workers in those two countries - the gross output of German workers being 48 times greater than that of their Tanzanian counterparts. The wage differential between the two countries was, however, 189 times in favour of German workers, making the African country a much cheaper place to locate in terms of labour cost per unit of output. Even so, the labour cost advantage enjoyed by Tanzanian manufacturers was more than ruled out because of a much higher cost of industrial materials that they had to bear. The actual breakdown of production costs in 1990 involving these two extreme case countries were: per \$100 worth of manufacturing output, direct labour costs of \$6.30 in the United Republic of Tanzania and \$24.98 in Germany, and respective material costs of \$78.10 and \$50.40, leaving respectively \$15.60 and \$24.62 as gross manufacturing profits in each country. This example illustrates one of the basic problems encountered by developing countries in general. Although low wages in developing countries hold down their unit cost of labour, high cost of intermediate inputs to manufacturers in those countries often nullifies this basic production cost advantage. The overall cost of intermediate inputs is higher in developing countries because they invariably include imports, especially for those engaged in manufacturing, in the form of processed or semi-processed industrial raw materials, and parts and components for finished products. The prices of imported intermediate goods, supplied frequently by developed countries, become higher in developing countries partly because they have to go through the arduous process of international trading, involving specialized trading agents and commission brokers. And the margins charged by various international trading agents often become exorbitant compared with the original prices of products and materials involved. It does seem that developing countries would be well advised

to devote more attention to choice of suppliers, whether of processed raw materials, intermediate inputs and components, or bought-in management and other business services, and to negotiate with such suppliers in the knowledge that there are usually alternative competitive suppliers available in the international market.

15. In traditional theory, production costs determine the price of a product. In reality, however, costs of production determine only a part of the final price, and that part has been shrinking to the extent that it is now becoming completely overshadowed by distributional and marketing costs. Again, in theory the price of an internationally-traded product deviates from its original factory-gate price by customs duties and international transportation costs. That costs of those two factors combined occupy a very insignificant portion of the final imported price to destination owes much to the continuous rounds of tariff reduction in developed and developing countries in recent years and the competitive price structure maintained by the global freight-carrying industry. However, famous brand name running shoes selling at a retail price of \$82 in New York, cost no more than \$6.50 at the factory gate of its original producer in the Republic of Korea. Similarly, a particular brand of men's shirts retailed in Germany at \$42 would have cost the German importer-distributor between \$1.25 to \$1.85 depending on the identity of its contract producer, located respectively in Sri Lanka, Poland or the former Yugoslavia. Indeed, a random survey by UNIDO involving typical original, brand name product-processing establishments located in three specific export-processing zones scattered through Sri Lanka to China, disclosed that the ratio between the actual factory-gate price and the retail price at destination is roughly 1:12. This high ratio is not meant to imply greed on the part of distributors. Not only do transport and storage costs have to be met, as well as wholesale and retail mark-ups, but major companies engage in very extensive advertising campaigns such as the sponsoring of international sporting events as part of their marketing efforts. What the high price ratio emphasizes is that in 1993 international competition prevails at two distinct levels - production and distribution. For a range of labour-intensive products such as textiles, garments and consumer electronics, there is competition in low value-added production among developing countries. For those same products, there is also competition in high value-added distribution among international brand suppliers.

16. It should be emphasized that the impact of industrialization on developing countries has varied considerably in terms of both overall economic growth and levels of industrial and technological development and capabilities. Some countries have registered a remarkable industrial performance and are moving rapidly towards technologically sophisticated industrial structures based on globally-oriented strategies. Most developing countries have lagged behind considerably, particularly with respect to technological developments and development of competitive skills and capability. Some countries, including the least developed countries, have managed to establish only rudimentary and vulnerable industrial structures and continue to be far behind in terms of economic growth; every year their number increases.

### C. Trade and economic policy

17. The direction of United States economic policy is clear. Not only will energetic attempts be made to reduce its fiscal deficit and to keep interest rates down, but the United States will continue to urge Western Europe to also lower interest rates for their own economic recoveries, and to open markets to the Eastern European countries in transition. At United States' prompting, Japan has pledged to reflate its economy with a very considerable fiscal and monetary stimulus to, *inter alia*, encourage imports and discourage exports. And the United States took the lead role in promoting the multibillion dollar international financial package to help the Russian Federation. All that is required for a global economic recovery, apparently, is a strong and convincing United States economic recovery. However, missing from this picture is the role of developing countries despite their almost fixed place in the traditional debate on a new international economic order. It is almost as though developing countries have become politically irrelevant with the passing of the cold war. In economic terms, this implies that the hitherto largely unutilized and underutilized resources of developing countries will remain superfluous in a global economy characterized by excess production and under-consumption, causing slow growth and unemployment in developed countries. For the foreseeable future, "cheap imports", i.e. effective import competition, will be resisted for the most part by the developed world, whether these imports originate in developed or developing countries.

18. Yet, paradoxically, the economic prospects for developing countries as a group are much better during the 1990s than in the previous decade. UNIDO's five-year projection places the growth rate for developing countries, excluding China, at an average of 4.4 per cent per year, with China expected to grow at an average 8 per cent a year for the next five years. The longer-term World Bank projections bear out this general optimism with an average rate of 4.7 per cent a year over the coming decade for developing countries. As the industrialized countries, one after another, have succumbed to economic recession over the past three years, the developing countries as a group have remained largely unaffected with a steady 3.2 per cent growth maintained over this period. This achievement is all the more impressive placed against the growth rates of the countries of the European Community. Foreign investors have responded to this comparison through the unprecedented increase in private non-bank investment flows to many developing countries. This sudden transformation in investor perception reflects the painful but successful economic reforms in many developing countries: liberalization of trade and finance, control of government spending, the sale of inefficient state enterprises and the relaxation of state control over industry and commerce. Equally, the "push" effect of low United States interest rates has helped a great deal. The success of the new administration in lowering long-term interest rates provides a genuine opportunity for growth in the United States and in the rest of the world. The most significant change for many developing countries in recent years was their willingness to open their economies, and to embrace the logic of free markets. It is ironic, therefore, to find that the rich world has decided, in the meantime, to reverse direction - to move towards managed

trade. There is every likelihood that under the new United States administration, free trade would undergo careful scrutiny as a functioning system not only in facilitating the exchange of goods and services among countries, but also in balancing conflicting national economic interests of trade partners, and partners to the partners. Therefore the immediate hope for developed and developing countries is a strong United States economic recovery that would reduce the immediate trade pressures on the United States administration even as that recovery provides a stimulus to world growth. Such a recovery would give the United States and the rest of the world time to resolve problems associated with trade gradually and rationally.

#### D. Trade and regional integration

19. The trend towards regional integration not only adds a new dimension to the existing framework of international cooperation, but is also expected to cause a large redistribution of industrial activities within the region itself, as illustrated by the major (and painful) industrial restructuring which is occurring in the European Community. The argument for regional integration based on economies of scale in production has, however, become increasingly unconvincing, since it is unlikely that any region would contemplate forcing the current massive industrial restructuring for the sake of a 3 to 5 per cent gain in the combined gross domestic product (GDP) of member countries over several years. Indeed, regional cooperation should be seen in its real defensive context. Discussion of regional trade pacts often reflects the desire on the part of the participating countries to alleviate through barter trade or a regional payments union the balance-of-payments problems that have come to plague most countries of the world. In such circumstances, a successful conclusion of current General Agreement on Tariffs and Trade (GATT) negotiations may not by itself bring a halt to the trend towards bilateralism and regionalism until a more rational international payments system is instituted.

20. The continuous failure so far to reach a new GATT agreement basically reflects the uneasy reaction towards forcible restructuring in a slow-moving world economy. The orthodox proposition that countries benefit from trade through international specialization becomes meaningless when the prospect of full employment does not exist, and becomes invalid when world trade is conducted on the basis of absolute rather than comparative advantage, without ever reaching a world-wide equilibrium in trade and payments balances. Understandably, therefore, there is now a sharp disjuncture between theory and practice in the trade policies of advanced countries. In the meantime, most developing countries have been converted into enthusiastic free traders and practitioners of doctrinaire economic liberalism. The change of ideological persuasion in the countries of Eastern Europe also commits them to joining the ranks of the free traders. It should be noted that both groups of countries are underdeveloped - meaning that they have more legitimate reasons for seeking protection for their domestic industries from foreign competition.

21. As long as it is not purely defensive, the trend towards regional and subregional cooperation involving not only the exchange of goods but a free movement of factors of production across

national borders represents one of the most exciting experiments injecting a new source of dynamism into an otherwise stagnant world economy which is preoccupied with "national" productivity gains. Productivity world-wide will improve if countries pool their resources and combine their separate national markets to exploit economies of scale in production. Essentially, such an experiment in different forms and on a much-reduced scale is proceeding along the border between the United States and Mexico, along the eastern and southern coastlines of China, Hong Kong and Taiwan Province, and between Singapore, Malaysia and adjacent Indonesian islands.

### III. LATIN AMERICA AND THE CARIBBEAN

#### A. Short-run outlook

22. Signs are increasing that the decade-long setbacks in investment and industrial output have ended in Latin America and the Caribbean. Thanks to achievements in containing hyper-inflation and the debt burden in many countries, foreign direct investment (FDI) has begun to flow in at a faster pace. FDI, which was a major source of technology transfer in earlier years, slowed down considerably in the 1980s. The privatization movement is opening up opportunities for investment, restructuring and new competition, promising to raise the stagnant level of productivity and efficiency. Debt-equity swap activities have progressed in tandem with privatization. Furthermore, regional and subregional movements for integration have returned, auguring well for an upsurge of trade and investment within the region.

23. The upswing in the region that began with an increase in GDP growth from 0.5 per cent in 1990 to 2.9 per cent in 1991 lost a little of its momentum in 1992 when growth fell to 2.3 per cent. The rate of growth in GDP in Latin America and the Caribbean in 1993 is expected to be 3.1 per cent and rise slightly to 3.5 per cent in 1994. Regional MVA is expected to grow by 2.8 per cent and 3.8 per cent in 1993 and 1994, respectively. The forecast for 1993 GDP and MVA growth rates, if achieved, would be higher than in any year since 1986, when GDP growth was 3.4 per cent and MVA growth was 5.0 per cent.

24. The most encouraging feature of the recovery process is the huge drop in inflation in many countries of the region. Based on the International Monetary Fund's (IMF) mid-year inflation estimates for 1993, Argentina will have reduced inflation from 171.7 per cent in 1990 to 9.3 per cent in 1993, Chile from 21.8 to 11.9, and Mexico from 22.7 to 8.0 per cent. Venezuela and Colombia were less successful, but have held inflation in the 30 per cent range since 1990. In Brazil inflation was brought down from nearly 3,000 per cent in 1990 to 413 per cent in 1991, but then increased to just over 1,000 per cent in 1992, and the mid-year forecast for 1993 from the IMF is for it to continue at about the same rate.

25. One downward risk in the UNIDO forecast might be the 3.0 per cent GDP growth forecast for Brazil in 1994. With continuing high inflation an important question is how much it will cost Brazil in terms of economic growth in order to stabilize the price level. However the outlook is positive since the new Government has announced the main outlines of a fresh start, with an emphasis on fiscal austerity and monetary stabilization.

Other countries have eliminated all subsidies, reduced trade barriers, deregulated markets for greater competition, and privatized (or promised to privatize) state enterprises, in addition to strict monetary stabilization. In short, a favourable business environment seems to have returned to the region.

26. While primary products are still an important export item, the main impetus for export growth is in the manufacturing sector. Despite the vast expansion in world trade in manufactures during the 1980s the region slightly increased its share of the world total from 1.5 to 1.7 per cent during the period. In the high technology sectors, where research and development costs tend to be a larger share of total production costs, the region also increased its share of the world market between 1980 and 1989. Thus in the high technology sectors of chemicals, medicinal and pharmaceutical products, plastic materials, non-electrical and electrical machinery, transport equipment, and professional, scientific and controlling instruments, have increased the share of world exports in five of these seven sectors. These are also the sectors that have shown the most rapid export growth in the region over the last 20 years. Thus in Brazil and Mexico, which account for 90 per cent of the region's total, high technology exports have been growing at an average annual rate of over 20 per cent since 1970. In 1989 high technology exports accounted for over half of total manufacturing exports in both countries (54 per cent in Brazil and 60 per cent in Mexico). 3/

27. Since world economic growth will remain sluggish in 1993, new export markets will be more difficult to penetrate and commodity prices could remain soft. However, the resumption of growth in the region continues to encourage increased purchases of imported capital goods by domestic entrepreneurs to improve the competitiveness of their plants. These purchases will establish a sounder basis for future growth, but at the cost of a temporary deterioration of trade balances. Flows of private capital into five Latin American countries (Argentina, Brazil, Chile, Mexico and Venezuela), tripled in 1991 to more than \$40 billion, eight times the 1989 level. The inflows, including a substantial repatriation of flight capital, equities, country funds and foreign direct investment placed abroad by residents, were sufficient to generate nearly three times the funds needed to finance the deficits on the countries' trade in goods and services, and helped to boost foreign exchange reserves by \$15 billion. 4/

28. According to the Inter-American Investment Corporation (IIC), during 1992, over \$10 billion was raised in the transfer of ownership of state enterprises to the private sector. This sum accounts for one quarter of total sales of state-owned firms worldwide and is second only to the transaction volume of privatization in Eastern

Europe. Argentina, Bolivia, Brazil, Peru, Venezuela and the Caribbean countries are expected to accelerate their efforts in this area. Chile and Mexico have virtually completed the process. Privatization has invigorated a broad spectrum of private investment as the new owners strive to install new technologies and streamline production.

#### B. Long-run prospects

29. Reflecting these favourable developments, the Inter-American Development Bank has projected an optimistic scenario to the year 2000. Noteworthy is the return of flight capital back to the region. It is expected to provide a powerful push reaching \$10.2 billion by the year 2000 from the \$2.6 billion available in 1992. Foreign direct investment will jump to \$22 billion in 2000 from \$9.3 billion in 1992. Exports of goods should more than double from \$131 billion in 1992 to \$268 billion in the year 2000. 5/

30. This optimistic scenario depends upon a successful response by domestic industry to the challenge of abrupt exposure to domestic, regional and international competition within the context of the new macroeconomic environment in Latin America and the Caribbean. Trade liberalization and greater stability in the monetary regime should lead to a new focus on the micro-economic environment and how this environment can become more supportive of industry. Domestic producers facing competition must be allowed to react flexibly by policy changes which encourage factor mobility and stimulate structural change. Trade deregulation and privatization must be accompanied by the establishment of a regulatory framework which stimulates economic efficiency and distributive justice in the provision of goods and services for markets often characterized by imperfection if not failure.

31. Two extremes have traditionally characterized the interface between Government and the private sector in the region: distance - if not antagonism - on the one hand and capture on the other. There is a major need for this interface to be transformed into a relationship of trust, based on a shared vision of a country's future, common interests and objectives, around which all parties can negotiate broad objectives, specific targets, and mutual responsibilities in attaining those targets. For example, many Latin American and Caribbean countries have invested heavily in their technology infrastructure over the past two or three decades. However, the linkages of these institutions, such as universities, government research and development laboratories, metrology and other test centres - with the production sector, have often been tenuous. The historically weak economic incentives for both parties - namely enterprises to upgrade their technology and innovative with new skills and capabilities, and science and technology institutions to deliver useful knowledge and advice - have been a basic cause of their relative isolation.

32. Creative cooperation between science and technology institutions and industrial firms can be based on a number of supports, including the development of cooperation in generic technologies still at the pre-competitive stage; the setting up of productivity and demonstration centres focusing

3/ "Latin America's Exports of Manufactured Goods, Part 2", Economic and Social Progress in Latin America, 1992 Report, Inter-American Development Bank, Washington, D.C., 1992, pp. 251-253.

4/ Annual Report 1992, Inter-American Investment Corporation, Washington, D.C., 1993.

5/ Ibid.

on clearing technological bottlenecks and facilitating domestic technology transfers; the establishment of feed-back mechanisms between firms and science and technology institutions, and among those institutions; the gearing of such mechanisms systematically to capability and skill accumulation in specific areas; and the establishment of highly focused criteria which facilitate the identification of those activities requiring promotional effort and other activities which can be pursued through market mechanisms.

33. While there has been wide recognition of the problems of transition to be overcome by the countries of Central and Eastern Europe and the former Soviet Union, almost as urgent are the similar problems of transition facing the countries of Latin America and the Caribbean as these countries move from inward-looking to outward-looking strategies. Having taken the first macroeconomic steps in liberalizing trade and implementing monetary stability these countries now require institutional and micro-economic reform to foster the creation and growth of the enabling environment so essential for industrial development.

34. The relatively low wages in comparison with the North American level as shown in table 1 below, reflect essentially technological differences which, in turn, can be roughly captured by measuring labour productivity as a percentage of the North American level. On average, labour productivity in the region is shown to be roughly 30 per cent of the North American level. The remaining 70 per cent represents a "technology gap" between the two regions. That gap compares with a gap of over 80 per cent for the East and South-East Asian region, i.e. labour productivity in Latin America and the Caribbean is 10 percentage points ahead of East and South-East Asia relative to the North American standard as of 1990. It should be borne in mind that the relatively high level of labour productivity (compared with the Asian and African regions) has been achieved with the active participation of foreign direct investment in the manufacturing sector of the region. For instance, in the Brazilian manufacturing sector, foreign-owned firms account on average for 28.5 per cent share of total sales, compared with 59 per cent for private domestic manufacturers and 12.5 per cent for state-owned manufacturers.

35. More-diversified export products and supply sources are beginning to emerge throughout the region in chemicals and in basic and other manufactures. Yet considerable scope exists for production of a wider variety of exports of basic and other manufactures. Promising areas include plumbing, heating and lighting equipment from Chile and Venezuela; essential oils and perfume materials from Chile and Uruguay; and plastic materials from Colombia and Venezuela. In chemicals and fertilizers, rapid export expansion in such countries as the Bahamas, Panama, Uruguay, and Venezuela is capturing an ever-increasing proportion of the region's exports.

36. The systematic changes in the region's export composition are related to both the stage of industrialization and the level of economic development of the individual countries. Broadly speaking, those countries that are at a somewhat early stage of industrialization and that are exporting primarily textiles, clothing, footwear

and leather are expected to gradually move into newer export industries such as electrical machinery, telecommunications equipment, and non-electrical machinery as economic development progresses and new technologies are absorbed. High-technology goods such as automobiles, computers and biotechnology products are becoming increasingly important to other countries besides Brazil and Mexico, the two leading exporters of these items in the region. Already Trinidad and Tobago and Uruguay are achieving high growth rates, and new industries are being developed in Argentina through joint ventures with firms in the United States, Europe and Japan. As exports of goods spread throughout the region, the focus is likely to be in chemicals, medicinal and pharmaceutical products, and plastic materials. Joint ventures with foreign companies are proving to be a successful way of transferring technology to the region. 6/

37. The training of research scientists and engineers is critical in the development of high-technology industries. So far, in Latin America and the Caribbean the average ratio of research scientists and engineers to total population is only about one-tenth of that in the industrialized countries and roughly one fourth of that in the Asian newly industrialized countries. Even countries such as Argentina, Brazil, Chile, and Uruguay fall considerably short of the amounts needed to draw high-tech industries. The development of domestic science and technology would permit countries in the region to obtain greater technical knowledge through foreign direct investment in high-technology goods. Additional investment in human capital would provide an important stimulus to the expansion of the high-technology sector. Overall, the region has experienced marked improvements in recent years, although major deficits persist. The development and upgrading of human capital in the coming years would undoubtedly produce dynamic changes in comparative advantage. The Latin America and the Caribbean region needs to identify the types of investments necessary to improve human resource capabilities.

38. Despite the reform efforts in virtually every country in the region, the challenges are daunting. In the long run, gains in labour productivity and efficiency-based growth depend crucially on, *inter alia*, technical progress and institutional structures that provide ample incentives, and the information on technological risk-taking. During the 1980s policy attention shifted away from questions of technology, industrialization and productivity towards issues of debt, capital flows, macroeconomic policy and trade liberalization. Moreover, periods of macroeconomic instability increased the benefits of short-run, rent-seeking behaviour, and reduced the pay-offs of the necessarily long-term process of accumulating technological capabilities. Nevertheless the accumulation of technological capabilities within productive enterprises remains central to economies of the region in their attempts to expand output, improve export performance and raise standards of living.

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6/ Economic and Social Progress in Latin America, 1992 Report, op. cit.

Table 1  
Labour productivity and wage earnings per worker  
in Latin America and the Caribbean as a percentage of the  
North American level, 1970, 1980 and 1990  
(In constant 1985 dollars)

| Industry                                        | Labour productivity |       |        | Wage per worker |       |       |
|-------------------------------------------------|---------------------|-------|--------|-----------------|-------|-------|
|                                                 | 1970                | 1980  | 1990   | 1970            | 1980  | 1990  |
| Food products                                   | 21.18               | 20.52 | 19.23  | 15.74           | 15.04 | 13.82 |
| Beverages                                       | 29.65               | 30.12 | 20.02  | 21.98           | 17.93 | 13.08 |
| Tobacco products                                | 45.16               | 35.61 | 15.83  | 18.93           | 15.78 | 13.48 |
| Textiles                                        | 37.67               | 44.71 | 34.92  | 22.64           | 20.52 | 16.60 |
| Wearing apparel                                 | 34.15               | 38.71 | 31.14  | 22.18           | 20.04 | 17.61 |
| Leather and fur products                        | 37.37               | 30.52 | 34.67  | 20.60           | 21.60 | 19.92 |
| Footwear (excluding rubber or plastic footwear) | 32.66               | 27.10 | 25.92  | 25.30           | 23.33 | 17.59 |
| Wood and cork products                          | 27.96               | 24.84 | 15.77  | 13.06           | 11.93 | 8.47  |
| Furniture and fixtures                          | 23.52               | 28.57 | 17.62  | 18.70           | 15.75 | 10.79 |
| Paper and paper products                        | 32.51               | 32.17 | 27.97  | 20.18           | 17.83 | 16.32 |
| Printing and publishing                         | 25.91               | 28.91 | 25.88  | 21.17           | 21.11 | 18.51 |
| Industrial chemicals                            | 29.50               | 30.29 | 32.33  | 23.00           | 23.06 | 16.03 |
| Other chemical products                         | 26.21               | 23.83 | 23.41  | 21.39           | 22.70 | 23.21 |
| Petroleum refineries                            | 91.47               | 67.32 | 108.30 | 33.37           | 31.54 | 28.09 |
| Miscellaneous petroleum and coal products       | 34.06               | 53.44 | 81.67  | 23.63           | 23.70 | 24.07 |
| Rubber products                                 | 37.49               | 38.89 | 54.53  | 22.43           | 23.67 | 24.70 |
| Plastic products n.e.c.                         | 36.09               | 33.64 | 32.25  | 18.96           | 18.08 | 22.29 |
| Pottery, china and earthenware                  | 40.68               | 32.34 | 32.86  | 19.35           | 16.97 | 15.02 |
| Glass and glass products                        | 24.89               | 29.73 | 33.68  | 22.64           | 21.52 | 18.79 |
| Other non-metallic mineral products             | 22.89               | 20.24 | 17.75  | 14.47           | 12.85 | 11.37 |
| Iron and steel                                  | 39.76               | 37.56 | 49.57  | 21.74           | 18.73 | 21.56 |
| Non-ferrous metals                              | 74.00               | 46.01 | 64.31  | 20.40           | 17.03 | 20.28 |
| Metal products                                  | 21.78               | 24.26 | 27.81  | 18.23           | 17.81 | 15.49 |
| Non-electrical machinery                        | 22.58               | 25.42 | 18.88  | 19.59           | 18.72 | 15.39 |
| Electrical machinery                            | 27.21               | 31.28 | 34.41  | 22.24           | 18.76 | 18.88 |
| Transport equipment                             | 26.56               | 30.92 | 24.76  | 18.24           | 18.68 | 15.16 |
| Professional and scientific goods               | 14.37               | 24.57 | 33.40  | 16.65           | 15.51 | 14.01 |
| Other manufactures                              | 37.08               | 34.82 | 31.70  | 20.11           | 16.92 | 19.52 |
| Total                                           | 29.50               | 29.93 | 29.22  | 18.39           | 17.19 | 15.13 |

Source: UNIDO database.

#### IV. SUB-SAHARAN AFRICA

##### A. Short-run outlook

39. The short-run prospect is for slow recovery of industrial growth for the region as a whole. The MVA growth rates are expected to climb to 4.0 per cent in 1993 and 3.6 per cent in 1994, from 1.1 per cent and 0.3 per cent in 1991 and 1992, respectively. These improvements in MVA growth rates exceed other sectors and lead GDP growth rates, which should increase from 1.1 per cent in 1992 to 2.5 per cent in 1993, and remain at that level in 1994. Although the manufacturing sector has performed better than other sectors in the past few years, its contribution to GDP is relatively small for the majority of countries in the region, and its importance in the economy varies from country to country. Thus, in Guinea the manufacturing sector accounted for only 1 per cent of GDP, while in Zimbabwe which has one of the largest, most diversified and better-integrated manufacturing sectors, the contribution was over 25 per cent of GDP. This improved performance is largely attributable to increased use of domestic raw materials in industries such as breweries, cement, confectionery, cotton

textiles, chemicals, fish conserving, footwear, leather goods, oil refining, paper, paint and synthetic fabrics. The performance was also facilitated by relatively greater access to foreign exchange for imports of raw materials, spare parts and machinery.

40. Despite these encouraging developments, there were also several causes for concern. One was the sharp increase in production costs recorded in 1991. High real interest rates for working capital or investment and energy costs, including electricity and oil, were the major factors pushing production costs upward, and thereby adversely affecting the competitiveness of the manufacturing sector of the countries concerned. There were also problems related to the productive base of manufacturing companies. The upward trend in capacity utilization needs to be seen in the context of the low absolute rates of capacity utilization, which, at under 50 per cent, imply continuing and substantial idle capacity in the manufacturing sector. Low capacity utilization as a result of limited export markets for African manufactures and raw material shortages, with a corollary increase in unit costs, was compounded by the decade-long import compression and its

associated shortage of spare parts and equipment, preventing adequate maintenance and increasing the number of production breakdowns and lay-offs. The other problem is that the GDP projection given for 1993 and 1994 may not have fully reflected the effects of the economic recession in Europe, the main purchaser of Africa's commodity exports. To the extent that these projections are over-optimistic, domestic demand and foreign exchange availability will deteriorate.

41. However, the major problem facing sub-Saharan Africa is its external debt of \$109 billion. Africa's debt may appear manageable in comparison with the \$462 billion that the Latin American and Caribbean countries owe. However, relative to the weak economies in Africa, it dwarfs the Latin American problem. Thus, whereas Latin America's external debt amounted to about 50 per cent of GDP in 1992, Africa's stood at almost 119 per cent of GDP. Moreover, Africa's debt continues to grow, principally through the build-up of unpaid interest over the past decade. Africa now meets only half its debt-servicing obligations, and only after a very considerable struggle. Reportedly, Africa spends four times more on interest on its debts than on health. A succession of debt rescheduling deals, known by the places - Toronto, Trinidad - in which creditor Governments designed the deals, have been proposed in recent years. But to date, creditor Governments have cancelled only 11 per cent of concessional bilateral debts.

42. The long-term historical trend shows a slowing down in growth rates of MVA, which averaged 6 per cent a year for the region as a whole during the 1970s but fell to an average of 4.1 per cent a year in the 1980s. One explanation is the wide-scale introduction of import substitution policies in the industrial sector in the years immediately following independence. So long as world prices for the primary commodities - the bulk of the region's exports - remained relatively high, investment in industry (mostly by Government) was possible and laid the basis for these import-substitute manufacturing activities. As economic recession spread throughout the region in the 1980s when the debt crisis began to take hold, the weaknesses of that policy were underlined as commodity prices contracted, investment flows dried up and the purchasing power of domestic consumers fell, with a resultant contraction in industrial output.

43. Paradoxically, the growth rates appear fairly good when compared with those of world industry as a whole or with those of developing countries as a whole. Yet they give far too optimistic a view of industry in Africa. Relatively good growth rates mean very little when the industrial base is so small. Africa's share of world MVA in 1975 was some 1 per cent and, nearly 20 years later, it is still nearly at the same level.

#### B. Long-run prospects

44. The range of manufacturing activities in the region has displayed a lack of dynamism in the post-independence period. Where transformation of natural resource does take place, it rarely goes beyond the semi-processing stage. More than two decades after independence, Zaire, for example, was still sending a large part of its copper ore to be refined "on toll" in Belgium. Where manufacturing is aimed at the domestic market, the traditional sectors of brewing and tobacco still predominate, followed by textiles. Ventures into

heavy industry have, in a large number of cases, resulted in a stream of costly "white elephant" projects. Moreover, the region's main trading partners have not encouraged the export of higher value added products. While the perceptions of West European investors have become increasingly inward-looking with perhaps a sideways glance at Eastern Europe, the spirit of enterprise in East and South-East Asia and parts of Latin America is alive and well. However, African Governments, with the exception of Mauritius, have seldom taken determined action to attract investors from Asia and Latin America despite the success of those investors in developing export markets in North America and Western Europe, and despite the relatively low costs at which bought-in management services, intermediate inputs and materials sourced elsewhere could be supplied from those potential investors from other developing countries and regions. The present document is not a forum to analyse the relationship between sub-Saharan Africa and Western Europe, but it should be emphasized that African countries have much to gain by cooperating with investors from the more dynamic industrial countries and regions of the world.

45. Africa's production structure remains highly skewed, and is concentrated in either semi-processing of export commodities or branches that are closest to final demand in the domestic market. The largest industrial branch in world industry in value terms is non-electrical machinery, followed by transport equipment, electrical machinery and food products. In Africa, the three largest industrial branches are food products, textiles and other non-metallic minerals. Most striking is the absence of machinery production, which indicates not only that the creative forces involved in technological terms in that subsector do not act as an agent of change in African industry but also that the region is highly dependent on imports not only of capital goods and a wide range of consumer goods, but also on many industrial inputs and management services.

46. Structural rigidity and resulting price distortions, especially in the agricultural sector, have become the main focus of reform in sub-Saharan African countries initiated by the World Bank. UNIDO is particularly concerned with the success of those African countries in handling structural changes in the manufacturing sector. In that context, it should be recalled that the most crucial structural change required in sub-Saharan African countries is the one that brings about a minimum level of industrialization in those countries. In most of them, a genuine industrialization process has either yet to take hold or is still in a nascent stage. On the other hand, industrialization is not only desirable, per se, but is frequently the chosen road for economic development in many of those countries. Under the circumstances, evaluating economic performance with the marginal rules of resource allocation advocated by the neo-classical school of economists would be clearly most inadequate, since those rules take the economic environment as fixed, and do not prescribe a process of change.

47. Given the vagaries of global macroeconomic trends and price fluctuations in international commodity markets, some Governments have taken strong initiatives and provided high public subsidies. That such policies have an economic rationality has long been argued by development

economists, and that such policies can be successful has been demonstrated in some of the dynamic countries of East and South-East Asia. The legitimacy of government leadership in a fledgling stage of industry stems from a judicious integration of industrial policy with technology policy, as well as a judicious blending of public and private entrepreneurship. An appropriate balance must also be struck between the resources devoted to building up critical "nodes" for the transfer and development of modern industrial technology, and the resources directed towards facilitating ever-wider popular participation in the process of industrial development, including the progressive upgrading of informal-sector activities.

48. The manufacturing sector of many countries in sub-Saharan Africa faces the challenge of reversing declining employment, labour productivity and wage earnings. Over the decade of the 1980s the sector has been afflicted by the confluence of several adverse factors such as: the global recession of 1981-1982 and the acceleration of the long-term decline in commodity prices on which the region is overdependent; the debt crisis; shortages of intermediate inputs, parts and machinery; declining availability of foreign exchange and high and fluctuating interest rates. The built-in inflexibility of many state-owned enterprises (where, for example, employees have tenure) coupled with managerial weakness wrought havoc to the manufacturing sector. The manufacturing productivity gap between North America and the region has widened over the last two decades. So has the relative wage differential. These general trends appear pervasive in the majority of manufacturing industries, with a few exceptions such as rubber products, pottery, china and earthenware. The region's manufacturing sector faces a Herculean task to reverse these trends and to begin the process of catching up with the developed market economies. Economists usually place emphasis on the importance of sensible macromanagement, involving control of inflation, money supply, interest rates, exchange rates etc. The case for this view has been amply demonstrated by the industrial experiences in sub-Saharan Africa as well as in Latin America and the Caribbean. However, in addition to physical capital, greater emphasis has to be placed on human capital and organizational-institutional capital. The latter two categories (or what might be called "indigenous capabilities") have fallen far short of their potential.

49. Technological capability has been defined as a broad set of elements comprising the entire complex of human skills (entrepreneurial, managerial and technical) needed to set up and to operate industries efficiently over time. As with all skills, the acquisition of technological capabilities is necessarily a learning process. All learning proceeds at a certain pace given the complexity of the knowledge involved and the initial capabilities of the learner. <sup>7/</sup> There are encouraging signs that the stock of scientists and engineers appears to be increasing rapidly in some countries of the region. Similarly, the number of science and technology policy-making bodies has increased in recent years from 69 in 1973, to 157

in 1979 and up to 197 in 1986. However, the extent to which these improvements have resulted in technical progress remains somewhat unclear. What is essential is that the linkages between research and technology, technological education and industrial production have to be strong and well articulated. The effectiveness of these linkages are largely a matter of institutional and organizational arrangements. With respect to organization and manpower issues, some combination of technological and organizational adaptation is essential for manufacturing efficiency. This has profound implications for national education, skills, and training institutions. Technology policy will be crucial for a correct response, and it will find expression in many areas. The necessary country policies will aim at the cost effective development of education and skills, the provision of consultancy services in engineering design and process layouts for small to medium-sized enterprises, and help with marketing and work organization changes.

50. Industrial rehabilitation programmes in sub-Saharan Africa repeatedly encounter skill shortages in middle management, supervisory staff, finance and marketing, accounting, quality control, repair and maintenance. Mismatches of skill supplies and demand present a perennial challenge even in developed countries, owing to imperfections, for example, temporal externalities, of labour markets and the long lead times involved after decision-making for training in urgently needed skills. In sub-Saharan Africa, the problem appears even more difficult because of the virtual non-existence of a functioning labour market in many countries of the region. While renewed efforts must be exerted to create a viable labour market to serve the industrialization process in the region, the education and training activities must be stepped up in order to make the industrial infrastructure more efficient. The causes of factory-level inefficiency have often been found to originate in a weak industrial infrastructure exemplified by temporary electricity cut-offs, telephone disconnections, water stoppage, delays in delivery of parts and components, non-availability of engineering troubleshooters and slow banking services. Modern factory systems require the efficient services of a modern tertiary sector that cannot be operated efficiently without well-qualified professionals, male and female. Research shows that one of the four predominant characteristics of women's labour force participation in the formal sector, especially as industrialization progresses, is their entry into the tertiary sector. Sub-Saharan Africa should undertake specific measures to ensure an adequate and increasing supply of professionals for the tertiary sector. The indigenous supply of these professionals seems very slow in materializing, with the delays undoubtedly related to the ineffectiveness of labour markets. Herein lies the central issue and the challenge for the region in the 1990s. As could be expected, studies reveal a high return on education for Africa. The social rates of return show 26 per cent for primary, 17 per cent for secondary and 13 per cent for tertiary education. But these rates could be an underestimation if the true external benefits of education and the long-run needs of the region are imputed in the calculation. "Brain drain" remains a very serious problem for the region and is one that cannot be easily corrected.

<sup>7/</sup> "Human resources and industrial development in Africa", UNIDO, PPD.208(SPEC.), p. 31.

51. A trend of particular relevance to the industrial sector is the wide-ranging promotion of

privatization, particularly so as most of the large-scale industrial projects in Africa have tended to be wholly or partly state-owned. The poor performance of the majority of such industrial enterprises is ample testimony to often poor management practices and, frequently, inappropriate choice of products. However, it should not be forgotten that when factor prices are distorted, for example, by protectionist policies, feasible, profitable projects and their products often become unfeasible when the protection/price distortions are removed. In practice, privatization programmes in the region are proving painfully slow to implement and are encountering numerous obstacles. The UNIDO Global Report for 1992/93 (UNIDO publication, Sales No: E.92.III.E.4) has emphasized that while there is a considerable commitment to divestiture by most African Governments, this commitment has not been matched in practice by the speed of divestiture. Consequently, efficiency gains and, especially, urgently required public deficit reductions have also been delayed. These delays have occurred because of the very considerable constraints arising from economic conditions, including difficulty in mobilizing resources arising from an underdeveloped financial and capital market infrastructure, low domestic savings rates, distorted prices in factor and product markets, a weak administrative capacity and lack of foreign-investor interest. Given the lack of foreign-investor interest and weak institutional and administrative capacity, some of the benefits of full divestiture could be obtained by divesting operational management and control to the private sector, with asset ownership retained by the State. Full divestiture involving asset transfer is likely to be gradual and confined generally to countries with a better institutional and administrative capacity, and to sectors attractive to foreign investors.

52. In an era of economic liberalization, tenders for the purchase of public enterprises are perforce open to both national and foreign bidders. But confidence in the economic prospects of the region is being shown only by two distinct groups of foreign investors - those from former colonial powers who see natural opportunities and a small band of entrepreneurs new to the region but prepared to take high risks. Hence, the formerly state-owned electricity industry in Côte d'Ivoire is now run by the French state electricity company, and a pulp plant in Cameroon has been handed over to an Asian company. Yet unlike Latin America and the Caribbean or China, for example, no major upturn in foreign direct investment has occurred. It should be noted that to attract both domestic and foreign investors, various partial privatization arrangements could be considered. These may include privatizing management through management contracts, leases, contracting out and concessions. Furthermore, rather than restrict the market by excluding particular groups of investors while ensuring that an unhealthy concentration of economic power does not occur, various arrangements such as "golden shares" (portions of assets retained by the State) can also win acceptance of foreign and other buyers.

## V. NORTH AFRICA AND WESTERN ASIA

### A. Short-term prospects

53. In North Africa, MVA growth rose from 1.5 per cent in 1990 to 3.1 per cent in 1991; in 1992 MVA

is expected to grow by 4.2 per cent and in 1993 by 4.9 per cent. This recovery pattern mirrors that of GDP growth. In Western Asia, MVA is expected to bounce back with 7.3 per cent growth in 1992 from 3.1 per cent growth in 1991. An MVA growth of 6.6 per cent is expected in 1993. It is remarkable that so far as industrial production is concerned, the destruction wrought by the Gulf War appears to have had little direct impact, except in Iraq, Jordan and Kuwait. The indirect impact, however, especially of the return of migrant workers, seems enormous and far-reaching, above all in the poorer countries of the region.

54. Most countries with the more diversified economies are taking serious actions to stimulate (or establish) their capital markets, draft new laws on labour and banking and exert efforts to standardized rules governing investment. In the case of the Syrian Arab Republic, moreover, the establishment of a stock market would be appropriate if the state-owned assets of the manufacturing sector were to be privatized.

55. In Tunisia, implementation of the Government's reform programme has in certain respects gone further than anticipated, but has lagged in others. Progress has been greatest in removing constraints on the private sector. Thus, the Government abandoned its main instruments for allocating resources when, in 1987, it dropped its prior authorization requirements for investment and most loans. Since then, only investors seeking the fiscal or financial advantages offered by various investment codes need authorization. The Government has also been successfully privatizing public enterprises in the face of a limited domestic absorption capacity and a delicate unemployment situation, and administrative barriers to entry into wholesaling have been removed. Competition is being fostered.

56. Tourism receipts for Morocco in 1991 dropped by 24 per cent to around \$970 million, and Eastern European demand for its phosphate-based exports weakened considerably. Demand for agro-industrial and manufactured products exports, on the other hand, was buoyant in 1991. Imports declined and interest charges were reduced considerably following the cancellation of the Saudi debt (\$2.7 billion). While the drop in tourism revenues and in phosphate exports turned the current account deficit (excluding grants) from 0.8 per cent of GDP in 1990 to 2.3 per cent of GDP in 1991, substantial external financial assistance and a record cereals harvest raised real GDP growth from 3.7 per cent in 1990 to 5.1 per cent in 1991. 8/

57. In the Gulf Cooperation Council (GCC) sub-region, the manufacturing sector, particularly in Saudi Arabia, received a strong impetus from the reconstruction work in Kuwait. This was supported by the GCC economic agreement that allows free flow of goods and services among its member countries. Industrialization in the next two years will be mainly dominated by the planned expansion of existing major industrial projects. This was projected to require more than \$10 billion over the years 1992 and 1993. Most of the projects involve expansion of existing facilities, the majority of which are in the petrochemical industries. Financing will be sought from the

8/ Trends in developing economies, the World Bank, Washington, D.C., 1992, pp. 369-370.

commercial sector and not by concessional loans. Forms of financing would be either equity financing or foreign borrowings. Nevertheless, GCC countries will be concerned with the sluggish growth in world energy demand and with the impact of induced lower oil prices on their development plans. Energy demand and prices are particularly dependent on the recovery of the United States economy and on the recession in Europe.

58. In the fertilizer industry, increased demand for food caused by world population growth and changing consumption patterns, limitations on the availability of arable land, and the introduction of more intensive cropping and of higher yielding plant varieties, have all resulted in increased fertilizer requirements. Combined consumption of nitrogen, phosphate and potash nutrients should increase by 2.2 per cent per annum through the year 2000 (Stanford Food Research Institute estimates). The largest sources of demand for these nutrients are expected to be in Asia, particularly China and India. The fertilizer industry in the North Africa and Western Asian region therefore has good market opportunities in 1990s, at both the regional and international levels. However, the international fertilizer market is cyclical in nature as a result of factors such as farm income, weather conditions, world fertilizer capacity and government policies. These fluctuations will have a major impact on the Arab fertilizer industry in the region.

59. In petrochemicals, the GCC countries need to formulate a joint strategy in order to strengthen their position regarding an agreement with the European Community (EC) on petrochemicals tariffs. An alternative may be a trade pact with EC, covering petrochemicals, aluminium and refined petroleum products. However, EC is not expected to provide major market opportunities for GCC producers in the 1990s. The drop in energy prices in 1992, which may well continue during the rest of the 1990s, is likely to provide the industrialized countries with a competitive advantage for the establishment of increased petrochemical capacity that may be required in the current decade. Further investment in world-scale facilities may increasingly be based on the proximity of production sites to markets, or on the proximity of feedstock sources in case energy-rich countries such as Saudi Arabia are prepared to offer substantial discounts on international energy prices.

#### B. Long-run prospects

60. Industrial growth prospects seem essentially good. The region as a whole has abundant capital, resources - especially oil, a huge and growing domestic market for manufactured goods, and Governments willing to diversify the economy and make it more efficient, if necessary through greater emphasis on the private sector.

61. The process of privatization of major manufacturing enterprises is expected to continue slowly in Egypt and the Syrian Arab Republic. In Egypt, chairmen of the virtually autonomous holding companies controlling state enterprises have reservations regarding privatization, administration of the reform process by Government is weak and there is an inadequate number of competent enterprise managers to implement the radical changes required in working practices. In addition, Egyptian officials are concerned about the impact of privatization reforms on inflation

and employment, and on the consequent possible social dislocation. In both countries, there is a preference for public sector reform that stops short of privatization of major industrial enterprises, particularly in sectors considered strategic. Downstream operations in the hydrocarbon sector (refining and distribution) in the Syrian Arab Republic might be opened up to private participation, while in Egypt the focus will be on medium and small enterprises, and on struggling firms partly owned by regional authorities in such subsectors as chemicals, fertilizers, refractories, cement, textiles and food processing.

62. In those countries with a small home market, the manufacturing sector will continue to be vulnerable to recessions in neighbouring countries, to import restrictions, and to high rates of customs duty. Increased efforts need to be exerted towards the creation of new export markets for manufactures because of continued change in market conditions in the countries of Eastern Europe and the former Soviet Union. Arab trade with the Council of Mutual Economic Assistance (CMEA) averaged around \$8 to 10 billion during most of the 1980s, when the trade surplus averaged more than \$2 billion in 1990 in favour of the Arab countries. In the region it will be necessary to build new trading and cooperation arrangements with the new countries of Eastern Europe and the former Soviet Union. Before the Gulf War, Iraq was the largest market for exports from Jordan. Aware of the importance of export market diversification following the Gulf crisis, the Government of Jordan is currently leading an intensive export market drive, particularly by introducing more sophisticated marketing techniques. Jordan aims to strengthen its trade relations with Western Europe, explore the Canadian market and improve and expand trade relations with South Asia, particularly the Indian subcontinent. Egypt and, to a lesser extent, Yemen are also emerging as relatively important trade partners with South Asian countries.

63. In Yemen, with government capital spending allocations being primarily directed towards infrastructural projects, efforts will need to be directed towards the establishment of an adequate framework to encourage private sector investment in industrial projects. Priority will be given to resource-based industries through the processing of agricultural and fisheries products and oil refining. Emphasis will be on the promotion of export industries since Yemen enjoys a good location with the port of Aden, and has a substantially underutilized skilled urban labour force, particularly in the Southern Governorates. Good prospects for industrial development will be influenced by Yemen's ability to find new export markets, particularly in East and Southern Africa and in Asia and the Pacific. However, constraints on industrial expansion will continue to relate in the short-term mainly to financial constraints and to the absence of an urban infrastructure necessary to support such expansion.

64. The Islamic Republic of Iran has a high potential for growth over the medium term. Besides construction, other sources of growth, that have been hitherto underpinned by continued reforms of the exchange, trade and price systems, are expected to be the commodity-producing sectors. In particular, a shift in relative prices towards tradeables should sustain agricultural and industrial growth. The very

large gas reserves of the country, moreover, can contribute importantly to electricity generation and provide the basis for petrochemical and metallurgical industries. Real GDP growth over 1992-1996 could feasibly average 4 to 5 per cent per year, enabling a modest growth of real incomes and consumption per capita. Medium-term export earnings should grow steadily partly owing to concerted ongoing efforts to increase oil and gas production and export volumes, and partly from reform-induced increases in non-oil exports, and planned investments and reforms in non-oil minerals. 9/

65. As Morocco moves out of its rescheduling phase, debt relief and, therefore, foreign savings should fall. Moreover, foreign savings, including increases in foreign investment, will mainly be directed to the private sector. These reduced foreign savings will have to be compensated by an increase in total domestic savings and the composition of domestic savings will need to change. Thus, an increase in government savings is one of the main preconditions for achieving the level of domestic savings that will be required in the 1990s. 10/

66. One of the greatest challenges facing the region, however, is the task of closing the gap in wealth and industrialization between the oil- and non-oil producing countries. The industrial growth of the former has been remarkable as in the case of Saudi Arabia. The oil producers are expected to forge ahead towards further industrialization through upstream and downstream investments based on oil. This usually involves highly capital-, energy- and technology-intensive industries. The diversification efforts will be accompanied by powerful incentive provisions such as free trade zones, zero-interest loans, low costs of water, electricity and other forms of energy, of feedstock from petroleum derivatives and of smelter input materials, as well as industrial sites and modern infrastructure, including telecommunications, transport, and harbour and airport facilities. Furthermore, relatively cheap labour from neighbouring countries could be employed. Non-oil producers in the region, in contrast, are usually over-populated and dispose of limited natural resources, and have low productivity and wages. In 1990, for instance, labour productivity (MVA divided by number of workers) in Egypt was \$7,122 compared with \$55,973 in Kuwait. Unless concerted efforts are made, the gap could widen further.

67. However, countries poor in natural resources could extricate themselves from low-equilibrium growth by the long-run accumulation of human capital. Indeed, in terms of literacy rates and school enrolment ratios, the region seems to have done better than sub-Saharan Africa, without matching the performance of the newly industrialized countries. In fact, by 1990 many countries in the region had achieved over 80 per cent, or even 90 per cent, of the industrialized North's average school enrolment ratio for primary and secondary schools combined (even though education of women is not encouraged in some countries of the region). Nevertheless, a recent study concluded that the GCC countries need

substantial additional personnel in skilled and semi-skilled occupations as well as trained managers. Saudi Arabia, for instance, had 11,600 students enrolled in technical education in the 1985-1986 school year, whereas the country needed an estimated total of 124,500 additional personnel in all skill categories. In some countries of the region, women do, in fact, enjoy a high level of education and training. However they are usually employed in the public sector. Women are a valuable but not fully utilized source of qualified industrial personnel and countries would benefit by integrating them more effectively into the industrial development process throughout the region.

## VI. SOUTH ASIAN SUBCONTINENT

### A. Short-run outlook

68. The immediate industrial outlook is for substantial recovery with 8.0 per cent MVA growth in 1993 and 5.9 per cent in 1994, compared with a level of 3.5 per cent in 1992 and -0.2 per cent in the previous year. The recovery of industry is also predicated upon an adroit management of the balance-of-payments crisis triggered by the Gulf War and the disappearance of remittances coupled with the loss of trade with the former Soviet Union. Furthermore, new industrial policy packages adopted by India and Pakistan in 1991 and further policy reforms in other countries in the region are expected to give a considerable boost to industry and to their economies.

69. Shifting constellations in the former Soviet Union in 1991 prompted Pakistan to position itself as a strategic player between energy-rich Central and Western Asia and energy-poor South Asia. Pakistan is running out of domestic oil and gas resources, and by 2003 will be using four times more oil and petroleum products than at present. In face of the severe energy shortage that threatens Pakistan's ambitious development plans for an industrial growth rate of 8.3 per cent in 1993 and 8.6 per cent in 1994, the Government and private sector are seeking to take advantage of the multiple market opportunities and the energy supplies and other resources of the newly independent States of the former Soviet Union, in particular, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. In 1991-1992, Pakistan signed economic and trade arrangements with these countries involving energy, food and consumer goods, medicines, telecommunications and banking. During 1992, industrial output increased by 7.3 per cent compared with 6.8 per cent in 1991. Deregulation, privatization and import liberalization, together with enhanced fiscal incentives, boosted investment in manufacturing by over 32 per cent. Textiles, particularly cotton spinning, sugar, chemical and vegetable ghee industries as well as small-scale manufacturing showed significant output increases. While there was some decline in cotton yarn exports, most other exports, particularly garments and non-traditional exports, continued to increase strongly.

70. In India, the reform of industrial policy, which continued on the lines of earlier policy initiatives, was incorporated in the new industrial policy announced by its Government in July 1991. The process of structural adjustment continued in 1992 with sustained emphasis on fiscal consolidation and further reforms in the

9/ Ibid., p. 276.

10/ Ibid., p. 369.

trade, industry and financial sectors. Progress was also made in the improvement of competitiveness by extending the deregulation of domestic industry and by opening the economy to greater international competition. Reforms were reinforced in the 1993 budget, including wide-ranging reductions in tariffs, increased investment incentives including foreign investment liberalization and trade account convertibility of the rupee; this last reform is expected to give exports a strong push. Industrial output recovered strongly at 4.0 per cent growth in 1992 from -0.3 per cent in 1991, and liberalization of the trade and industrial policy regimes, which increased the supply of imported inputs, helped to stimulate output. Improved agricultural output provided a stimulus to the agribusiness sector, and capital and intermediate goods, as well as consumer durables, recovered strongly.

#### B. Long-run prospects

71. The industrial policy reforms adopted in the region, particularly those of India, appear destined to have positive growth effects throughout the 1990s. But the outcome will depend on how quickly and effectively the reform measures are implemented. Herein lies the real test of the government bureaucracy - a challenge to change long-entrenched habits formed during the regulatory regime before 1985. Nevertheless, there are some encouraging signs that habits are changing and successes are being reaped through a slow process of learning by doing. The Indian computer industry provides an example.

72. Creating and nurturing new industries like the computer industry and maximizing employment creation in conventional unskilled labour-intensive industries are crucial to industrialization. New industries aim at higher levels of value added through developing and mastering technology, as well as upgrading the skill content of human resources. Mere continuation (expansion) of unskilled labour-intensive manufacturing activities would not help raise the low level of labour productivity of manufacturing in the region.

73. The modernization of the manufacturing sector in the long run will require a fundamental policy shift with regard to upgrading human resources. Currently, the adult literacy rates for Bangladesh (35 per cent), India (48 per cent) and Pakistan (35 per cent) are among the lowest in the developing world. The same applies for average years of schooling. Therefore, more resources should be devoted to the eradication of illiteracy, the promotion of primary and secondary education and tertiary science and increasing the number of technology graduates. There are high rates of return on education in India, with primary education achieving the best results, and generally falling rates for higher levels of education. It should be cautioned, however, that such calculations do not include spillover intangible benefits.

### VII. EAST AND SOUTH-EAST ASIA

#### A. Short-run outlook

74. Despite the recession and growth slow-downs in other regions, the East and South-East Asian region has been maintaining respectable GDP and MVA growth. Both short- and long-run prospects of industrial growth seem promising, although country-

and area-specific problems abound, such as the threat of double-digit inflation (Hong Kong, Indonesia and the Republic of Korea), and overloading of infrastructure facilities (shortages of electricity, transport and communications facilities). Furthermore, numerous countries of the region show signs of shortages of both skilled labour and well-trained managers. The region as a whole is expected to achieve 7.4 per cent and 9.4 per cent MVA growth in 1993 and 1994, respectively, supported by 6.8 per cent and 6.3 per cent GDP growth respectively. This performance represents a small improvement over the 1991-1992 period, when MVA grew by 8.0 per cent and 5.6 per cent, and GDP by 6.7 per cent and 5.3 per cent, respectively. In view of problems of overheating in the growth-leading countries, overall restraints in growth-oriented policy would appear prudent. Malaysia, Thailand and the Republic of Korea, for example, are using fiscal and monetary brakes to slow their economies.

75. The industrial thrust of the region is expected to originate mainly in investment and trade, particularly within the region and between the region and Japan and China. Compared with other regions, the relative level of investment has been, and is expected to remain high. Indonesia, Malaysia, Republic of Korea, Singapore and Thailand, all fast performers in the industrialization race, have achieved a 35 to 40 per cent rate of investment (as a percentage of GDP), and are expected to do the same in the next couple of years. These activities will provide not only the Keynesian demand force but also will incorporate modern technology newly embodied in machines, equipment and new infrastructure. This process helps to upgrade the industrial base one step further. For instance, the computerization ratio in small- to medium-scale enterprises in the Republic of Korea increased to 54 per cent in 1991 from 25 per cent in 1989. The high rate of investment has been accompanied by a high rate of growth of trade in the region. While world trade grew by only 3 per cent in 1991, regional exports grew by 13 per cent (including intraregional exports) and imports 17 per cent (including intraregional imports).

#### B. Long-term prospects

76. By any standard, industries in the region have been performing admirably. With the exception of the Philippines, all countries and areas increased their MVA, total employment, labour productivity and wage earnings per worker between 1980 and 1990. The differences in labour productivity and wage earnings between countries are, however, striking. Singapore registered the highest per-worker MVA (\$26,849) and wage earnings (\$7,892) in 1990. The lowest figures were recorded by Indonesia.

77. The differences in wage rates, however, offer opportunities for investment and plant migration from high-wage economies to low-wage ones for labour-intensive industries. Thus, for example, as wage rates rose in the 1970s, apparel enterprises from the Republic of Korea and Taiwan Province of China moved to Thailand and Indonesia. In turn, skill-intensive industries such as semiconductors, automobile parts, electrical appliances and numerically controlled machines moved to the higher-wage countries in the region from Japan and the United States. This process of product diversification in the industrial structure and trade composition of the region

enabled it to avoid the consequences implied by the trade-pessimism hypothesis (namely, that the world market for labour-intensive goods would be limited if all developing countries emulated the newly industrialized countries' strategy of export-led growth).

78. The important question is whether the industrial dynamism of the region can be expected to continue through the 1990s and beyond. The affirmative response to this question is based on the view that as long as these countries continue to liberalize unilaterally their trade policies and to maintain current high levels of investment, the Asian market will continue to outpace growth in other major export markets, principally North America and Europe. It is also likely that real wages in Japan and the Asian newly industrialized countries will continue to increase faster than elsewhere in Asia, and as a result, the flow of direct investment from the higher-wage Asian countries to the lower-wage Asian countries will be maintained for some time to come. Since intra-Asian direct investment appears to complement and reinforce intra-Asian trade, the bias in favour of intraregional over interregional trade is likely to grow stronger.

79. One of the distinguishing features of the Asian newly industrialized countries is that they are not only adept in producing goods cheaply but they excel in marketing them abroad. Some of these countries have large trading companies of their own with a world-wide sales network, which perform a multiple task of selling, buying, brokering, financing, insuring and shipping. A few Asian countries benefit from the so-called Chinese diaspora, which functions as a giant trading network. Many electronics products produced in these countries even bear their own brand names and are promoted world-wide with active advertising campaigns. Professional market research firms are being created. Up to now, these traders handled only those products originating from or to their own countries. With the rapid expansion in regional trade, however, they are becoming multilateral and international traders. International trading and marketing, the traditional preserve of the more advanced developed countries, have therefore been successfully encroached upon by a few developing countries for the first time. And products marketed by these Asian traders abroad carry less-imposing prices because the trade margins charged by them are less forbidding, introducing a completely different dimension to the traditional international product price competition.

## VIII. CHINA

### A. Short-run outlook

80. Both the short- and long-term outlook for industrial growth seem promising. Inflation has apparently been tamed thanks to the austerity programme imposed since 1989, and trade surpluses since 1990 are providing policy makers with greater room to manoeuvre. Domestic savings and investment are keeping pace with the high levels maintained by the neighbouring newly industrialized countries, and inflows of foreign direct investment have accelerated. Industrial reform and restructuring have been progressing rapidly, despite some confusion about the final shape of "market socialism with a Chinese character". However, the greatest challenge

remains in meeting the ever-increasing demand for high-quality managers, engineers and scientists to help push Chinese industry towards higher levels of technology content.

81. Short-term prospects are good for 1993 and 1994. The rate of GNP is expected to grow by 11.0 per cent in 1993 and 10.0 per cent in 1994 respectively, compared with 12.8 per cent in 1992 and 7.5 per cent in 1991. Some non-government observers, however, are predicting even higher growth in 1993 and, with the threat of overheating of the economy, measures are being taken to slow down money supply growth and wage increases. As usual, the industrial sector will lead the growth of other sectors with a rate of 15.0 per cent in 1993 and 13.0 per cent in 1994. These figures compare with 20.4 per cent industrial growth in 1992 (at double the planned target) and 7.6 per cent in 1991. The leadership of the industrial sector will be supported by the favourable trade surpluses recorded in 1992 (\$5.4 billion) and 1991 (\$8.1 billion). A trade surplus of only \$0.6 billion is expected for 1993 (a deficit was recorded in the first half of the year), as policy makers seize the room for manoeuvre with respect to importing industrial inputs and technology. The availability of the latter determines industrial growth in a special way. China's exports are expected to continue to rise, growing by 16.0 per cent in 1993 and 15.0 per cent in 1994. 11/

82. An additional source of industrial vitality is provided by two factors, namely, township-village-based community enterprises and foreign direct investment. Both operate freely on the basis of market forces and competition in purchasing inputs and selling outputs, unlike the state-owned enterprises. These enterprises are significant in China, both for their overall employment impact and for the opportunities (current and potential) they offer to women for entrepreneurship and for involvement at management and decision-making levels of these enterprises. Industrial output from township-village-based community enterprises grew by over 15 per cent in 1989 and 1990, when an austerity programme was imposed on the entire economy in order to fight run-away growth and inflation. Furthermore, many such enterprises serve not only domestic but also overseas demand. In 1984-1985, the share of such enterprises in the total foreign exchange earnings of China was only 4.5 per cent, but it soared to 20.8 per cent by 1990. This development has created new rural linkages in the flow of goods, services, capital and technologies from abroad. According to the Asian Development Bank, FDI increased markedly in 1992. Pledged and actual FDI rose to \$57.5 billion and \$11.2 billion, or 480 per cent and 260 per cent, respectively, exceeding that in 1991. However, mainly as a result of past policies restricting the sale of products of foreign-funded enterprises on the domestic market, most FDI has been earmarked for small-scale, labour intensive and service-oriented projects. The original goals of bringing in advanced technology and management skills to upgrade Chinese industry were largely not attained. However, there is increasing awareness that FDI can provide not only capital technology

11/ Asian Development Outlook, Asian Development Bank, Oxford University Press, 1993, pp. 86-87.

and management skills, but also competition that can force domestic enterprises to improve their efficiency.

#### B. Long-run outlook

83. The process of introducing market mechanisms has been uneven, with a "stop-go" pattern of policy pronouncements, as evidenced by the shifting emphasis of the debate between the conservatives and reformists during the past three or four years. Nevertheless, the available evidence provides encouraging signs concerning the long-run development of the process. Work done at the Economic and Social Commission for Asia and the Pacific (ESCAP) has suggested that at present, the market mechanism in China is imperfect. Along with pushing forward economic reforms, China's economic system should be accompanied by a series of applicable policies. The changes required involve three aspects:

- (a) Decentralization, which in China is called "simplifying the administration and giving more decision-making powers to the local Governments and local enterprises";
- (b) Promoting the commodity economy and invigorating production and circulation activities;
- (c) Open-door policies.

84. According to the Asian Development Bank, some concern has arisen about the overexpansion of capital investment. Fixed investment expenditure is estimated to have increased by about 38 per cent in 1992, the highest growth in the past four years. Much of the increased investment was added to existing capacity in such industries as mechanical and electrical equipment; while investment decreased proportionately in areas that needed expanding such as energy, raw materials and transportation. Soft budget constraints and the lack of market-driven, self-regulatory mechanisms provided incentives for enterprises and localities to overexpand investment. One lesson from the past is that excessive investment is a leading cause of the "stop-go" episodes. However, direct control of the scale of investment has become more difficult for the Government, partly because only about 10 per cent of investment funds now come from state budgets. 12/

85. Financial sector reforms are also in progress. The newly developed non-bank financial organizations have played an increasing role in financing non-state sector activities. Such organizations include cooperative investment foundations, savings and loan associations, trust investment companies, and national and regional stock markets. In the rural areas, farmers' credit cooperatives have become major sources of finance for rural economic development. These market-driven financial institutions have great flexibility in determining interest rates, raising funds and deciding where to invest them.

86. With the intensification of reforms in the financial system many people have found more investment options. A rapid expansion of the securities market allowed consumers to shift expenditure away from commodities to bonds and stocks. Reforms governing house ownership also

induced a change in consumption behaviour in favour of long-term savings. Further reforms of state enterprises are expected to increase their independence from the State and to make them fully responsible for their production, investment and employment decisions.

87. The services sector will benefit from the recent government decisions on accelerating the sector's growth and reform. The new target for development of the services sector is an annual growth rate of 11 per cent for the rest of the decade. Priority will be given to transport, telecommunications, science and technology, and education.

#### IX. EASTERN EUROPE AND THE FORMER SOVIET UNION

##### Introduction

88. In terms of industrial structure, a major difference between these countries and the market economies of Europe is the size of enterprises and the degree of industrial concentration within each industry. There is a relative absence of small and medium-sized enterprises in the region. In Poland, for example, of 825 identified markets, 516 (62 per cent) had leading enterprises with a market share of more than 30 per cent and over 25 per cent had a leading firm with over 60 per cent market share. The industrial structure of the region reflects the fact that industry was developed to serve the needs of a command economy. The average size of a Soviet-type enterprise is more than 10 times that of the average firm in the same type of industry in a developed market economy. Often one or two large enterprises dominate an industry or a product line. Enterprises also were highly dependent on input and output markets in the former Soviet Union. Demand was guaranteed and in many cases still is. Industrial enterprises across the region were highly integrated, both horizontally and vertically. As a result, it is not uncommon now for an airplane factory to produce everything from bolts to seat covers. In Western Europe it is not uncommon for firms to be either horizontally or vertically integrated, but rarely are they both.

89. Because energy prices were highly subsidized and remain so in much of the region, the energy and material consumption of most enterprises in the region is well above the Organisation for Economic Cooperation and Development (OECD) norm for the given level of technology. In addition, the technology level is generally outmoded and energy-inefficient. Recent investment has been concentrated only in certain sectors, primarily the military. And, while some of the countries of the region had very strict environmental protection codes in place for the regulation of air and water emissions, until recently little if any enforcement has taken place.

90. The structure of production, especially in the former Soviet Union, Bulgaria and Romania, was extremely complex, consisting of specialized monopolies that manufactured products in a very sophisticated division of labour across the region. For example, within the Soviet Union, the Baltic States were given the role of producing many of the high-technology goods, particularly for the former Soviet military industrial complex. Of the nearly 600 "all Union"

enterprises built in Lithuania, most produce or produced relatively sophisticated electrical, chemical, computer and other knowledge-intensive products. Kazakhstan, on the other hand, was almost exclusively a mineral supplier, with most processing taking place in the Russian Federation.

91. Enterprises in the region are also characterized by large amounts of inter-enterprise debt. As credit was tightened in the early days of transformation, enterprises began to fund themselves through the process of non-payment. Enterprise A would not pay enterprise B until it was paid by enterprise C. But enterprise C often went bankrupt. The level of such debt is now staggering, particularly in the Commonwealth of Independent States. In the Russian Federation for example, inter-enterprise debt rose from R 40 billion at the end of 1991 to R 751 billion at the end of March 1992, more than twice the amount of bank credit during the same period.

#### A. Short-term outlook

92. After two years of sharp economic contraction (over 20 per cent) in the Central European group, 1992 saw a bottoming out of the drop in output in the former Czechoslovakia and Hungary over the year, while Poland registered growth in its GDP estimated at 0.5-2 per cent. In 1993, the upturn is expected to continue in Poland (2 per cent) and begin in Hungary (0-3 per cent) and the Czech Republic (1-3 per cent). Much will depend on the economic performance of Western Europe, particularly Germany, which is now in deep recession. As a result of the split of Czechoslovakia and decreased trade, Slovakia will experience continued contraction (-3 per cent). In Slovenia, the downturn is expected to bottom out this year. MVA growth was estimated for 1992, in Hungary and Poland, at -8.5 per cent and 3.4 per cent, respectively, with the forecast at -1.6 per cent and 1.5 per cent for 1993 and 1.9 per cent and 4.0 per cent for 1994.

93. Bulgaria and Romania continued to experience severe contractions in their economies in 1992 of 22 per cent and 15.4 per cent, respectively. The year 1993 is expected to be more moderate, but the trend will continue downward. Albania is in a critical situation as the poorest country in Europe and will see little improvement without massive amounts of outside assistance.

94. The Republics of the former Soviet Union have seen some of the sharpest drops in output and income across the region, especially the five Central Asian Republics. While contractions in 1991 were more modest, inconsistencies in the reform programme and the collapse of inter-republican trade, together with the unrestricted printing of roubles and extension of credits to failing enterprises, led to sharp increases in the money supply, hyperinflation (an average of 1,750 per cent for the year) and large drops in output in 1992 (18.5 per cent for the Commonwealth of Independent States as a whole). The Baltic States also experienced a sharp contraction of economic activity in 1992, ranging from 28 per cent in Estonia to 43.9 per cent in Latvia. The ambitious transformation programmes the three countries chose after declaring their independence in the fall of 1991 were constrained by the collapse of trade with rest of the former Soviet Union, and the unreliability of the supply and erratic increases in the price of Russian Federation oil and gas, upon which they are highly dependent.

95. The brunt of the recession has been borne by the industrial sector. Over the 1989-1992 period, industrial output across the region as a whole declined over 40 per cent. In many of the countries, industrial output is now at 1975 levels or below.

#### B. Long-run prospects

96. Several factors have contributed to the fall in output across the region. The most important are the distorted economic structures inherited from the past, the implementation of radical economic reforms and the collapse of trade between members of the Eastern trading arrangement, the Council for Mutual Economic Assistance (CMEA), in 1991. These, however, mask more fundamental problems inherent to the region, micro-level rigidities and structural imbalances, particularly inefficiency at the enterprise level that have resulted in an anaemic supply response to the incentives that should have been induced by macro-economic reforms.

97. The fact that the macro-level reforms did not bring about the desired supply response should not be surprising. Macro-level reforms can do little for industrial inadequacies such as those characteristic of the command economies: lack of an entrepreneurial cadre and a thriving private sector, inadequate technology, a lack of managerial and supervisory personnel, and a shortage of financial institutions to ensure the proper monitoring of enterprise performance. They also can do little to directly ensure adequate accounting, management information and quality control systems. These are the real impediments to the economic development of the countries of the region.

98. Along with the restructuring of the industrial base, the sustainable growth of the region will depend on its integration into the world economy. Without an outlet for its goods and access to hard currency, transformation will be slowed. But integration will be a formidable task. Trade is becoming more regionalized in trading blocs that increasingly exclude those outside the region (three quarters of the world's trade takes place within trading blocs and 60 per cent of European Community trade in 1989 was within the Community). The West and the European Community in particular must be amenable to imports from the Central and Eastern Europe and the former Soviet Union if these countries are not to be marginalized.

#### X. CONCLUSIONS: TECHNOLOGICAL CAPABILITY AND INDUSTRIAL COMPETITIVENESS

99. The abandonment of central planning in Eastern Europe and the former Soviet Union along with market liberalization movements in developing countries have engendered new appreciation for an old institution - the market mechanism. It has become increasingly clear that functioning market institutions cannot be created overnight by decree, that bankers must be trained to recognize the potential profitability of projects and to take risks rationally, that engineers should be retrained to be cost-conscious in combining intermediate inputs and that enterprise managers should be trained in marketing skills in order to compete in the market-place.

100. International competitiveness in the field of industry is becoming an increasingly important and

complex concept, yet the (re)attainment of international industrial competitiveness is a sine qua non for developing countries seeking to accelerate and sustain their industrial development over the long term. Industry has to drive overall socio-economic growth, inter alia, by building on opportunities arising in international markets. These opportunities can be seized if the capabilities exist or can be created in the industrial structures of various developing countries to technologically upgrade these industrial structures.

101. With its broad connotations for the human dimension of development, human resource development is of central concern in the industrial context. It is an important precondition for, as well as a result of, industrialization, that is, it is both an investment good and a consumption good in the jargon of economics. It relates not only to the educational and training system at the national, regional and enterprise levels, but it is also closely associated with building up capabilities for the development, transfer and absorption of technology and in the provision of solutions to a whole range of strategic industrialization issues. Central to the discussion of human resource development for industry is the need to create and upgrade continuously the skills, motivation and know-how required by industry and the need to utilize fully the human capabilities essential to achieving dynamic industrial growth. This is also borne out by the new patterns of industrial development and competition in world economy which indicate that: (a) a high skill level is a key determinant for an economy's competitiveness; (b) human resource development is an essential part of a country's industrial structural adjustment process; (c) the ability of a country to upgrade and reconvert industry-related skills is a major instrument in combating unemployment; (d) an economy needs enhanced and focused skill generation in order to seize

opportunities in advancing industries and rapidly changing markets, as well as to increase the pace of innovation in production.

102. After the recent political events in Eastern Europe and the economic reforms in many developing countries, the free market model has been restored to the central position in economics from which Lord Keynes had dislodged it only temporarily. The "magic of the market" is now presumed to cure all problems in both developed and developing countries, thereby dismissing the validity of the theory of economic development. But the crucial difference between developing and developed countries lies in the extent of the development of their markets. Policy prescriptions must distinguish between industrialized economies with highly developed goods and capital markets and developing economies with poorly developed or - especially at the present time - collapsed markets. Markets sometimes behave in a perverse manner - as the collapse of the Exchange Rate Mechanism in Europe has shown. A vital task for Governments is to create an enabling environment that facilitates economic and industrial development in developing countries, as well as in the countries of Eastern Europe and the former Soviet Union. Collective social decisions can play an important role in providing public good and stability in markets, and in capturing scale economies, as well as in protecting those who do not have the strength to benefit from the market. It seems clear that a degree of macroeconomic planning, and industrial regulation is also essential - for example in the areas of human resource development (including industrial training) and technology policy, where private costs and benefits often diverge markedly from social costs and benefits. The problem for Governments and the international community is to decide the fine balance between too much and too little intervention, between too much and too little protection, and between too much and too little privatization.